```
                    Welcome to DialogClassic Web(tm)
 Dialog level 05.05.00D
Last logoff:  26jul05 16:30:04
Logon file001 27jul05 15:01:59
          *** ANNOUNCEMENT ***
                    ***
--UPDATED: Important Notice to Freelance Authors--
See HELP FRÉELANCE for more information
                    ***
NEW FILES RELEASED
***Aluminium Industry Abstracts (File 33)
***Ceramic Abstracts/World Ceramic Abstracts (File 335)
***CSA Life Sciences Abstracts (File 24)
***Corrosion Abstracts (File 46)
***Materials Business File (File 269)
***Engineered Materials Abstracts (File 293)
***CSA Aerospace & High Technology Database (File 108)
***CSA Technology Research Database (File 23)
***METADEX(r) (File 32)
***FDAnews (File 182)
***German Patents Fulltext (File 324)
                    ***
RESUMED UPDATING
***Canadian Business and Current Affairs (262)
***CorpTech (559)
                    *** Chemical Structure Searching now available in Prous Science D
of the Future (F453), IMS R&D Focus (F445), Beilstein Facts (F390),
and Derwent Chemistry Resource (F355).
                    ***
     >>> Enter BEGIN HOMEBASE for Dialog Announcements <<<
     >>>    of new databases, price changes, etc.      <<<
                    ****
KWIC is set to 50.
HILIGHT set on as ' '
 * * *

File   1:ERIC 1966-2004/Jul 21
       (c) format only 2004 The Dialog Corporation
 *File   1: Updates suspended by ERIC until
Q3, 2005

      Set  Items  Description
      ---  -----  -----------
Cost is in DialUnits
?

B 155, 159, 5, 73
       27jul05 15:02:17 User259876 Session D781.1
            $0.79    0.227 DialUnits File1
     $0.79  Estimated cost File1
     $0.06  INTERNET
     $0.85  Estimated cost this search
     $0.85  Estimated total session cost   0.227 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R) 1951-2005/Jul W4
         (c) format only 2005 The Dialog Corp.
  File 159:Cancerlit 1975-2002/Oct
         (c) format only 2002 Dialog Corporation
 *File 159: Cancerlit is no longer updating.
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Please see HELP NEWS159.
  File   5:Biosis Previews(R) 1969-2005/Jul W4
         (c) 2005 BIOSIS
  File  73:EMBASE 1974-2005/Jul 27
         (c) 2005 Elsevier Science B.V.

      Set  Items  Description
      ---  -----  -----------
?

S (INDUCING OR INDUCE OR ENHANCING OR ENHANCE) (S) TH2
          220453  INDUCING
          543500  INDUCE
          122007  ENHANCING
          262119  ENHANCE
           46263  TH2
      S1    8102  (INDUCING OR INDUCE OR ENHANCING OR ENHANCE) (S) TH2
?

S (IMMUNOSTIMULATORY (W) (OLIGONUCLEOTIDE OR (NUCLEIC (W) ACID))
>>>Unmatched parentheses
?

S (IMMUNOSTIMULATORY (W) (OLIGONUCLEOTIDE OR NUCLEIC))
            7056  IMMUNOSTIMULATORY
          126323  OLIGONUCLEOTIDE
          297388  NUCLEIC
      S2      53  (IMMUNOSTIMULATORY (W) (OLIGONUCLEOTIDE OR NUCLEIC))
?

S S1 AND S3
>>>"S3" does not exist
             8102  S1
                0  S3
      S3        0  S1 AND S3
?

S S1 AND S2
             8102  S1
               53  S2
      S4        0  S1 AND S2
?

Set      Items   Description
S1        8102   (INDUCING OR INDUCE OR ENHANCING OR ENHANCE) (S) TH2
S2          53   (IMMUNOSTIMULATORY (W) (OLIGONUCLEOTIDE OR NUCLEIC))
S3           0   S1 AND S3
S4           0   S1 AND S2
?

S S1 AND (ISS OR (IMMUNOSTIMULATORY (W) OLIGONUCLEOTIDE))
             8102  S1
             7746  ISS
             7056  IMMUNOSTIMULATORY
           126323  OLIGONUCLEOTIDE
               45  IMMUNOSTIMULATORY(W)OLIGONUCLEOTIDE
      S5       27  S1 AND (ISS OR (IMMUNOSTIMULATORY (W) OLIGONUCLEOTIDE))
?
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S S5 AND (NON-CPG)
               27  S5
                0  NON-CPG
      S6        0  S5 AND (NON-CPG)
?


Set      Items   Description
S1        8102   (INDUCING OR INDUCE OR ENHANCING OR ENHANCE) (S) TH2
S2          53   (IMMUNOSTIMULATORY (W) (OLIGONUCLEOTIDE OR NUCLEIC))
S3           0   S1 AND S3
S4           0   S1 AND S2
S5          27   S1 AND (ISS OR (IMMUNOSTIMULATORY (W) OLIGONUCLEOTIDE))
S6           0   S5 AND (NON-CPG)
?

S S5 NOT PY>2000
               27  S5
          7195788  PY>2000
      S7       10  S5 NOT PY>2000
?

RD
...completed examining records
      S8        5  RD (unique items)
?

T S8/3,K/ALL

  8/3,K/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2005 The Dialog Corp. All rts. reserv.

13317919   PMID: 10093118
 Inhibition of allergic inflammation in the lung by plasmid DNA allergen
 immunization.
  Spiegelberg H L; Broide D; Tighe H; Roman M; Raz E
  Department of Pediatrics, University of California San Diego, School of
Medicine, La Jolla 92093-0833, USA. hansspiege@aol.com
  Pediatric pulmonology. Supplement (UNITED STATES)  1999,  18  p118-21,
ISSN 1054-187X  Journal Code: 9014095
  Contract/Grant No.: AI 40682; AI; NIAID
  Publishing Model Print
  Document type: Journal Article
  Languages: ENGLISH
  Main Citation Owner: NLM
  Record type: MEDLINE; Completed

  The nature of the immune response (Th1/ Th2  ) in mice to protein antigens
or allergens was compared to that of immunization with pDNA encoding the
same antigens. pDNA immunization induced a Th1 response and no IgE
antibodies whereas the proteins induced a Th2 response and IgE
antibodies. Furthermore, the pDNA induced Th1 response dominated over the
protein elicited Th2 response in a secondary immune response. In
particular, a preexisting Th2 response (as is the case in allergic
patients) did not prevent a new Th1 response to an allergen-pDNA booster
injection. The major reason why pDNA immunization induced a Th1 response to
allergens was the presence of immunostimulatory non-coding DNA sequences (
  ISS  ) in the plasmid constructs having a CpG motif. These ISS caused
antigen presenting cells to secrete INF-alpha, INF-beta and IL-12, all
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cytokines that **induce** naive T cells to differentiate into CD4+ Th1 cells and CD8+ Tc1 cells. Passive transfer of both Th1 and Tc1 cells from pDNA immunized mice into naive mice inhibited a **Th2** response and IgE antibody formation to a subsequent injection of allergen in alum. pDNA immunization or **ISS** -oligonucleotide injection prior to allergen challenge reduced both immediate type airway sensitivity and late phase allergen induced eosinophil filtration of the lung. Allergen-pDNA immunization...

8/3,K/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

12982940 PMID: 10940873
Systemic or mucosal administration of immunostimulatory DNA inhibits early and late phases of murine allergic conjunctivitis.
Magone M T; Chan C C; Beck L; Whitcup S M; Raz E
National Eye Institute, National Institutes of Health, Bethesda 20892-1857, USA.
European journal of immunology (GERMANY) Jul 2000, 30 (7) p1841-50, ISSN 0014-2980 Journal Code: 1273201
Contract/Grant No.: AI 40682; AI; NIAID
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

... manifestations of allergic disease, affecting 15 % population in the United States annually. Short ragweed (RW) is a major cause of seasonal allergies. Immunostimulatory DNA sequences (**ISS** or CpG motifs) can inhibit an on-going **Th2** /allergic response and **induce** a de novo Th1 response. In this study, we investigated the ability of these **ISS** to modulate allergic responses in a RW-induced mouse model of seasonal allergic conjunctivitis. Systemic or mucosal administration of **ISS** oligonucleotide (**ISS** -ODN) after RW sensitization inhibited both the immediate hypersensitivity response and the late-phase cellular infiltration and induced a RW-specific Th1 response. **ISS** -ODN administration suppressed the rise of RW-specific IgE titers after repeated allergen challenge. Furthermore, **ISS** administration was more effective than dexamethasone in inhibiting the allergic response. Mechanistically, the **ISS** -induced immunomodulatory effects were abolished when mice were treated with anti-IL-12 neutralizing antibodies, suggesting a pivotal role for type 1 cytokines in the inhibition of both the immediate hypersensitivity and the late-phase cellular infiltration. Thus, **ISS** -ODN is a novel anti-inflammatory and immunomodulatory agent that significantly inhibits the allergic response and may provide an alternative to the current standard care...

8/3,K/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

12929678 PMID: 10879058
[DNA vaccines against allergy]
Sato Y; Kasukawa R
Department of Internal Medicine II, Fukushima Medical University School of Medicine.
Nippon rinsho. Japanese journal of clinical medicine (JAPAN) Jun 2000,

58 (6) p1307-14, ISSN 0047-1852 Journal Code: 0420546
Publishing Model Print
Document type: Journal Article; Review; Review, Tutorial ; English Abstract
Languages: JAPANESE
Main Citation Owner: NLM
Record type: MEDLINE; Completed

DNA vaccines **induce** a T-helper-1(Th1)-biased immune response through a Th1-promoting adjuvant effect of immunostimulatory DNA sequences(**ISS**) with unmethylated CpG motifs present in plasmid DNA. Th1 responses induced by DNA vaccines were shown to modify an ongoing **Th2** immune response. This potency was explored as therapy for allergy and asthma. In murine models vaccination with plasmid DNA encoding an allergen reduced an ongoing...

8/3,K/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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12516632 PMID: 9826449
Immunostimulatory DNA is a potent mucosal adjuvant.
Horner A A; Ronaghy A; Cheng P M; Nguyen M D; Cho H J; Broide D; Raz E
Department of Medicine, and The Sam and Rose Stein Institute for Aging, University of California at San Diego, 9500 Gilman Drive, La Jolla, California, 92093-0663, USA. aahorn@aol.com
Cellular immunology (UNITED STATES) Nov 25 1998, 190 (1) p77-82, ISSN 0008-8749 Journal Code: 1246405
Contract/Grant No.: AI01490; AI; NIAID; AI40682; AI; NIAID
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Most proteins delivered to mucosal surfaces fail to **induce** mucosal or systemic immune responses. We demonstrate that a single intranasal (i.n.) coadministration of a model antigen (beta-galactosidase, beta-gal) with immunostimulatory sequence oligodeoxynucleotide (**ISS** -ODN) induces a mucosal IgA response equivalent to that induced by i.n. codelivery of beta-gal with cholera toxin (CT). Furthermore, i.n. and intradermal (i.d.) delivery of the beta-gal/ **ISS** -ODN mix stimulates equivalent Th1-biased systemic immune responses with high-level cytotoxic T lymphocyte (CTL) activity. In contrast, i.n. immunization with beta-gal and CT results in a **Th2** -biased systemic immune response with poor CTL activity. Our data show that i.n. delivery of **ISS** -ODN provides effective adjuvant activity for the induction of both mucosal and systemic Th1-biased immune responses. This immunization approach deserves consideration in the development...

8/3,K/5 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2005 BIOSIS. All rts. reserv.

0012658995 BIOSIS NO.: 200000377308
Conjugation of immunostimulatory DNA to the short ragweed allergen Amb a 1 enhances its immunogenicity and reduces its allergenicity
AUTHOR: Tighe Helen; Takabayashi Kenji; Schwartz David; Van Nest Gary; Tuck Stephen; Eiden Joseph J; Kagey-Sobotka Anne; Creticos Peter S; Lichtenstein Lawrence M; Spiegelberg Hans L; Raz Eyal (Reprint)

AUTHOR ADDRESS: Department of Medicine, University of California San Diego School of Medicine, 9500 Gilman Dr, La Jolla, CA, 92093-0663, USA**USA
JOURNAL: Journal of Allergy and Clinical Immunology 106 (1 Part 1): p 124-134 July, 2000 2000
MEDIUM: print
ISSN: 0091-6749
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

...ABSTRACT: the safety of immunotherapy by means of chemical modification of allergens have not been successful because it greatly reduced their antigenicity. Recently, immunostimulatory DNA sequences (**ISS** or CpG motifs) have been shown to act as strong TH1 response- **inducing** adjuvants. Objective: We sought to determine whether conjugation of **ISS** to the major short ragweed allergen Amb a 1 results in enhanced immunotherapeutic potential in mice and decreased allergenicity in human subjects. Methods: A 22-mer **ISS** oligodeoxynucleotide (**ISS** -ODN) was coupled to Amb a 1 and used for immunization of mice, rabbits, and monkeys. Results: In mice the Amb a 1- **ISS** conjugate induced a TH1 response (IFN-gamma secretion), whereas Amb a 1 induced a **TH2** response (IL-5 secretion). The TH1 response was not observed with an Amb a 1-non-**ISS** conjugate. Coinjection of Amb a 1 with **ISS** -ODN was much less effective in **inducing** a TH1 response. In mice primed for a **TH2** response, injection with Amb a 1- **ISS** conjugate induced a de novo TH1 response and suppressed IgE antibody formation after challenge with Amb a 1. Amb a 1- **ISS** conjugate induced high-titer anti-Amb a 1 IgG antibodies in rabbits and cynomolgus monkeys, whereas Amb a 1 alone or Amb a 1 coinjected with **ISS** -ODN did not **induce** a detectable response. Amb a 1- **ISS** conjugate was less allergenic than Amb a 1 alone, as shown by a 30-fold lower histamine release from human basophils of patients with ragweed allergy, whereas mixing **ISS** -ODN with Amb a 1 did not reduce histamine release. Conclusion: Amb a 1- **ISS** conjugate has an enhanced TH1-biased immunogenicity and reduced allergenicity. It may offer a more effective and safer approach for allergen immunotherapy than currently available...
?

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Set     Items   Description
S1       8102   (INDUCING OR INDUCE OR ENHANCING OR ENHANCE) (S) TH2
S2         53   (IMMUNOSTIMULATORY (W) (OLIGONUCLEOTIDE OR NUCLEIC))
S3          0   S1 AND S3
S4          0   S1 AND S2
S5         27   S1 AND (ISS OR (IMMUNOSTIMULATORY (W) OLIGONUCLEOTIDE))
S6          0   S5 AND (NON-CPG)
S7         10   S5 NOT PY>2000
S8          5   RD (unique items)
?

RD S5
...completed examining records
      S9       13  RD S5 (unique items)
?

S S9 NOT S8
              13  S9
               5  S8
     S10       8  S9 NOT S8
?
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T S10/3,K/ALL

10/3,K/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

15311005 PMID: 15007346
Airway peptidoglycan and immunostimulatory DNA exposures have divergent effects on the development of airway allergen hypersensitivities.
Chisholm Dugald; Libet Lev; Hayashi Tomoko; Horner Anthony A
Department of Medicine, University of California, San Diego, La Jolla, CA 92093-0663, USA.
Journal of allergy and clinical immunology (United States) Mar 2004, 113 (3) p448-54, ISSN 0091-6749 Journal Code: 1275002
Contract/Grant No.: AI40682; AI; NIAID; AR47360; AR; NIAMS
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

...have been suggested to provide immunologic protection against allergic diseases. However, some TLRs use unique intracellular signaling pathways, suggesting that ambient TLR ligand exposures might **induce** a range of host responses. OBJECTIVE: These investigations compared peptidoglycan (PGN; TLR2)-induced and immunostimulatory sequence DNA oligodeoxynucleotide (**ISS** -ODN; TLR9)-induced innate responses and determined how airway exposures to these TLR ligands affect adaptive immunity and the asthmatic phenotype. METHODS: In in vitro and in vivo studies innate responses to PGN and **ISS** -ODN were compared. Alternatively, mice were intranasally immunized with ovalbumin (OVA) alone or OVA plus PGN or **ISS** -ODN, and adaptive immune profiles and responses to airway OVA challenge were assessed. RESULTS: PGN and **ISS** -ODN induced divergent innate responses predictive of their having **TH2** - and TH1-biasing adjuvant potential, respectively. Consistent with these findings, mice intranasally immunized with OVA alone had relatively weak adaptive responses, whereas intranasal OVA/PGN- and OVA/ **ISS** -ODN-coimmunized mice had much stronger humoral and cellular responses that were **TH2** and TH1 biased, respectively. Finally, on airway allergen challenge, mice intranasally immunized with OVA alone had modest **TH2** -biased airway hypersensitivity responses, whereas airway responses were greatly exaggerated for intranasal OVA/PGN-immunized mice. In contrast, intranasal OVA/ **ISS** -ODN-immunized mice had little evidence of airway hypersensitivity after airway allergen challenge. CONCLUSIONS: Considered in a larger context, these results suggest that inspired air...

10/3,K/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

15023957 PMID: 14568966
Accumulation of peribronchial mast cells in a mouse model of ovalbumin allergen induced chronic airway inflammation: modulation by immunostimulatory DNA sequences.
Ikeda Reid K; Miller Marina; Nayar Jyothi; Walker Linda; Cho Jae Youn; McElwain Kirsti; McElwain Shauna; Raz Eyal; Broide David H
Department of Medicine, University of California at San Diego, La Jolla, CA 92093, USA.
Journal of immunology (Baltimore, Md. - 1950) (United States) Nov 1

2003, 171 (9) p4860-7, ISSN 0022-1767 Journal Code: 2985117R
Contract/Grant No.: AI33977; AI; NIAID; AI38425; AI; NIAID
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

... for 1-6 mo have a significant accumulation of peribronchial mast cells. This accumulation of peribronchial mast cells is associated with increased expression of the **Th2** cell-derived mast cell growth factors, including IL-4 and IL-9, but not with the non- **Th2** cell-derived mast cell growth factor, stem cell factor. Pretreating mice with immunostimulatory sequences (**ISS**) of DNA containing a CpG motif significantly inhibited the accumulation of peribronchial mast cells and the expression of IL-4 and IL-9. To determine whether mast cells express Toll-like receptor-9 (TLR-9; the receptor for **ISS**), TLR-9 expression by mouse bone marrow-derived mast cells (MBMMCs) was assessed by RT-PCR. MBMMCs strongly expressed TLR-9 and bound rhodamine-labeled **ISS** . However, incubation of MBMMCs with **ISS** in vitro neither inhibited MBMMC proliferation nor inhibited Ag/IgE-mediated MBMMC degranulation, but they did **induce** IL-6. Overall these studies demonstrate that mice exposed to repetitive OVA challenge, but not acute OVA challenge, have an accumulation of peribronchial mast cells and express increased levels of mast cell growth factors in the lung. Although mast cells express TLR-9, **ISS** does not directly inhibit mast cell proliferation in vitro, suggesting that **ISS** inhibits accumulation of peribronchial mast cells in vivo by indirect mechanism(s), which include inhibiting the lung expression of **Th2** cell-derived mast cell growth factors.

10/3,K/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

14383865 PMID: 12213404

Liposomal immunostimulatory DNA sequence (ISS -ODN): an efficient parenteral and mucosal adjuvant for influenza and hepatitis B vaccines.

Joseph Aviva; Louria-Hayon Igal; Plis-Finarov Alla; Zeira Evelyne; Zakay-Rones Zichria; Raz Eyal; Hayashi Tomoko; Takabayashi Kenji; Barenholz Yechezkel; Kedar Eli
The Lautenberg Center for General and Tumor Immunology, Hebrew University-Hadassah Medical School, P.O. Box 12272, Jerusalem 91120, Israel.

Vaccine (Netherlands) Sep 10 2002, 20 (27-28) p3342-54, ISSN 0264-410X Journal Code: 8406899
Contract/Grant No.: AI 40682; AI; NIAID; AI 47078; AI; NIAID
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Liposomal immunostimulatory DNA sequence (ISS -ODN): an efficient parenteral and mucosal adjuvant for influenza and hepatitis B vaccines.

Synthetic oligodeoxynucleotides (ODNs) containing immunostimulatory sequences (**ISS** -ODN, also known as CpG-ODNs) have been shown to display in experimental models potent Th1-biassed immunoadjuvant activity upon parenteral or mucosal co-administration with a variety of antigens. In an attempt to potentiate adjuvant activity, and to reduce dose and number of

administrations, **ISS** -ODN was entrapped (up to 90% efficiency) in large (1.5 microm) multilamellar liposomes using a simple and fast (5 min) procedure. Mice were vaccinated...

... the viral hemagglutinin and neuraminidase, HN) or with hepatitis B surface antigen particles (HBsAg), either non-encapsulated or liposome-encapsulated, together with free or liposomal **ISS** -ODN (5-25 microg per dose). At 3-12 weeks post-vaccination, the humoral (systemic, mucosal) and cellular responses and protective immunity were assessed. Vaccine formulations containing liposomal **ISS** -ODN co-administered with either soluble antigen or liposomal antigen (in the same vesicles or in separate vesicles) were up to 30 times more effective than formulations containing un-encapsulated **ISS** -ODN in **inducing** : (a) antigen-specific serum and mucosal IgG2a and IgA antibodies; (b) splenocyte proliferative response, cytotoxic activity and IFNgamma production; (c) a DTH response; and (d) protection against virus challenge. The response was Th1-dominant in the influenza model and a mixed Th1+ **Th2** response in the hepatitis B model. No adverse reactions were noted. Thus, liposomal encapsulation of **ISS** -ODN further enhances its inherent adjuvant activity.

10/3,K/4 (Item 4 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

13744138 PMID: 11403224

Systemic administration of immunostimulatory DNA sequences mediates reversible inhibition of Th2 responses in a mouse model of asthma.

Broide D H; Stachnick G; Castaneda D; Nayar J; Miller M; Cho J Y; Roman M ; Zubeldia J; Hayashi T; Raz E

Department of Medicine, University of California, San Diego, La Jolla 92093, USA. dbroide@ucsd.edu

Journal of clinical immunology (United States) May 2001, 21 (3) p175-82, ISSN 0271-9142 Journal Code: 8102137

Contract/Grant No.: AI 33977; AI; NIAID; AI 38425; AI; NIAID; AI 40682; AI; NIAID

Publishing Model Print; Erratum in J Clin Immunol 2002 Jan;22(1) 49; Erratum in Note Hyashi T [corrected to Hayashi T]

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

This study investigated whether immunostimulatory DNA sequences (**ISS**) **induce** a transient or sustained inhibition of **Th2** responses to inhaled antigen. We sensitized mice with subcutaneous injections to develop a **Th2** response to ovalbumin (ova) and then administered a dose of **ISS** prior to ova inhalation challenge. Mice were then rechallenged with ova by inhalation a second time at varying time points after the first ova inhalation (1 to 8 weeks later) to determine whether the **ISS** dose administered prior to the first ova inhalation protected against a subsequent second ova inhalation challenge. A single dose of **ISS** inhibited the **Th2** response to the first inhalation of ova antigen, as well as 4 weeks later to the second inhalation of ova. However, **ISS** did not inhibit a **Th2** response to the second inhalation of ova 8 weeks later. The reversible inhibition of **Th2** responses at 8 weeks suggests the need for repeated **ISS** administration at monthly intervals.

10/3,K/5 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

0014041316 BIOSIS NO.: 200300000035
Immunostimulatory sequence oligodeoxynucleotide-based vaccination and immunomodulation: Two unique but complementary strategies for the treatment of allergic diseases.
AUTHOR: Horner Anthony Adam (Reprint); Raz Eyal
AUTHOR ADDRESS: University of California San Diego, 9500 Gilman Dr, La Jolla, CA, 92093-0663, USA**USA
JOURNAL: Journal of Allergy and Clinical Immunology 110 (5): p706-712 November 2002 2002
MEDIUM: print
ISSN: 0091-6749
DOCUMENT TYPE: Article; Literature Review
RECORD TYPE: Abstract
LANGUAGE: English

...ABSTRACT: termination of allergic hypersensitivities remains an elusive therapeutic goal. Traditional immunotherapy with allergen extracts is the only currently used intervention that has been shown to **induce** allergen tolerance, but it has a limited scope of efficacy. However, recent studies suggest that immunostimulatory sequence oligodeoxynucleotide (**ISS** -ODN)-based interventions might offer an alternative and potentially more effective means for extinguishing **TH2** -biased hypersensitivities. Three basic **ISS** -ODN-based immunotherapeutic strategies have been studied to date. Immunization with allergen mixed with **ISS** -ODN, immunization with allergen- **ISS** -ODN conjugates, and immunomodulation with **ISS** -ODN alone all have proved efficacy in the attenuation of the allergic phenotype in mice. Preliminary results with allergen- **ISS** -ODN conjugate vaccines in allergic patients have also been encouraging. This article will provide our perspective on the application of **ISS** -ODN-based vaccination and immunomodulation to the treatment of atopic diseases and the immunologic basis for their antiallergic activities.

10/3,K/6 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0013485045 BIOSIS NO.: 200200078556
Immunological adjuvants in allergy vaccines: Past, present and future
AUTHOR: Wheeler Alan W (Reprint); Woroniecki Stefan R
AUTHOR ADDRESS: Allergy Therapeutics Ltd, Dominion Way, Worthing, West Sussex, BN14 8SA, UK**UK
JOURNAL: Allergology International 50 (4): p295-301 December, 2001 2001
MEDIUM: print
ISSN: 1323-8930
DOCUMENT TYPE: Article; Literature Review
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Hundreds of compounds have been tested over the years in a search for adjuvants to incorporate with antigens or allergens to **enhance** the immune response. Despite this, aluminum salts have been the only adjuvants that have been both registered for clinical application and used on a large...

...and toxicity associated with use of aluminum. In addition, aluminum salts are known to be potent stimulators of T helper (h) 2 cell activity.

Because **Th2** activity directs towards an allergic response, aluminum salts are potentially counterproductive when used as adjuvants in the immunologic treatment of type 1 hypersensitivity. Many soluble...

...use in allergy vaccines formulated with the depot adjuvant L-tyrosine. Other ways of stimulating a Th1 response using immunostimulatory DNA sequences (immunostimulatory DNA sequences (**ISS**) or CpG motifs) as 'built-in' adjuvants are being studied. Further interesting adjuvants reported in the literature, such as Montanide ISA 720, SAF-m, RC...

10/3,K/7 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0013257308 BIOSIS NO.: 200100429147
Immunostimulatory sequence DNA linked to the Amb a 1 allergen promotes TH1 cytokine expression while downregulating TH2 cytokine expression in PBMCs from human patients with ragweed allergy
AUTHOR: Marshall Jason D; Abtahi Simin; Eiden Joseph J; Tuck Stephen; Milley Robert; Haycock Fiona; Reid Michael J; Kagey-Sobotka Anne; Creticos Peter S; Lichtenstein Lawrence M; Van Nest Gary (Reprint)
AUTHOR ADDRESS: Dynavax Technologies Corp, 717 Potter St, Ste 100, Berkeley, CA, 94710, USA**USA
JOURNAL: Journal of Allergy and Clinical Immunology 108 (2): p191-197 August, 2001 2001
MEDIUM: print
ISSN: 0091-6749
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

...ABSTRACT: TH1 cells. Promotion of TH1 immunity by means of immunotherapy in allergic patients has led to the alleviation of symptoms that result from allergen-specific **TH2** responses. Objective: Our purpose was to investigate whether the TH1- **enhancing** properties of ISSs could be used to alter the **TH2** -dominated immune response of allergic PBMCs in vitro. Methods: Ragweed protein-linked **ISS** (PLI) was generated from a specific, highly active 22-base **ISS** and Amb a 1, the immunodominant allergen in ragweed pollen, to combine the TH1- **enhancing** properties of ISSs with allergen selectivity, and its activity was investigated in PBMC cultures from subjects with ragweed allergy. Results: PLI was markedly successful at reversing the dominant allergen-induced **TH2** profile while greatly **enhancing** IFN-gamma production. Delivering ISSs in a linked form proved to be much more effective at modulating the resulting cytokine profile than delivering free ISSs...

10/3,K/8 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

12703703 EMBASE No: 2004293117
Customized antigens for desensitizing allergic patients
Ferreira F.; Wallner M.; Thalhamer J.
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...goals are to increase safety by minimizing the risk of IgE-mediated side effects and to improve efficacy of specific immunotherapy by counterbalancing the ongoing **Th2** -biased allergic response. Synthetic peptides in question are mimotopes, such as artificial peptide structures mimicking IgE binding epitopes, B-cell epitope-derived peptides, and T...

...allergenic activity and conserved antigenicity, such as hypoallergens. An alternative to genetic engineering is the chemical modification of pure allergens with immunostimulatory DNA sequences (allergen- **ISS** conjugates), which mask IgE epitopes and add a desirable Th1- **inducing** character to the allergen molecule. Several of these customized allergen preparations have been already evaluated for their safety in clinical provocation studies. So far, clinical trials showed the efficacy and safety of immunotherapy with T-cell epitope-containing peptides and with allergen- **ISS** conjugates for cat-allergic and ragweed pollen-allergic patients, respectively. In addition, two preparations consisting of hypoallergenic derivatives are being evaluated for immunotherapy of birch...
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